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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/624,535	07/23/2003	Tohru Kimura	02860.0748	6664

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EXAMINER
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HALEY, JOSEPH R

ART UNIT	PAPER NUMBER
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2627

DATE MAILED: 09/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/624,535

Applicant(s)

KIMURA ET AL.

Examiner

Joseph Haley

Art Unit

2627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-10 and 12-16 is/are rejected.
- 7) ☒ Claim(s) 3 and 11 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Drawings***

The amendments to the drawings filed on 6/16/06 have been accepted by the Examiner.

### ***Specification***

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

### ***Claim Objections***

Claim 1 objected to because of the following informalities: "a optical functional" in line 11 should be --an optical functional--. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 4-7, 9, 12, and 14-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Hendricks et al. (US 6947368).

In regard to claim 1, Hendricks et al. teaches an objective lens unit for converging a light flux onto an information recording plane of an optical information

recording medium in an optical pickup apparatus (fig. 1), comprising: a first optical element arranged so as to be opposite to the optical information recording medium (fig. 1 element 12); a second optical element arranged at a light source side of the first optical element so as to be opposite to the first optical element and including a ring-shaped structure in which plural ring-shaped zones are formed on at least one optical surface of the second optical element such that neighboring ring-shaped zones cause a predetermined optical path difference for incident rays (fig. 1 element 14. In regard to the ring shaped zones on the second optical element, these are not shown in the drawings and are therefore considered the same as fig. 3 or Hendricks et al.); and each of the first and second optical elements having a optical functional section and a flange section solidly formed around the optical functional section (fig. 1 element 13), wherein the flange section of the first optical element and the flange section of the second optical element are formed so as to fix the first and second optical elements at predetermined respective relative positions (column 4 lines 6-10).

In regard to claim 4, Hendricks et al. teaches the neighboring ring-shaped zones are formed to displace relatively in an optical axis direction so as to cause the predetermined optical path difference (fig. 3).

In regard to claim 5, Hendricks et al. teaches the ring-shaped structure is a diffractive structure to diffract an incident ray (fig. 4b see also column 8 lines 27-33).

In regard to claim 6, Hendricks et al. teaches the ring-shaped structure corrects a chromatic aberration caused by the first optical element (see column 8 lines 27-33 where Hendricks teaches correcting for aberration).

In regard to claim 7, Hendricks et al. teaches a used wavelength is 500 nm or less (column 4 lines 2-3).

In regard to claim 9, Hendricks et al. teaches an image side numerical aperture is .75 or more (column 4 line 40).

In regard to claim 12, Hendricks et al. teaches the first optical element is a refractive lens (objective lens 12 clearly refracts the light towards the medium).

In regard to claim 14, Hendricks et al. teaches the flange section of the first optical element and the flange section of the second optical element are shaped to fit and come in contact with each other so that the first and second optical elements are fixed at the predetermined respective relative positions (fig. 1 element 13. see also column 4 lines 6-10).

In regard to claim 15, Hendricks et al. teaches an optical pickup apparatus comprising: the objective lens unit described in claim 1 (fig. 1).

In regard to claim 16, Hendricks et al. teaches an optical information recording and/or reproducing apparatus, comprising: the optical pickup apparatus described in claim 15 (fig 1).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 8, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hendricks et al. in view of the applicant's admitted prior art.

In regard to claims 2 and 8, Hendricks et al. teaches all the elements of claim 2 except wherein each of the first and second optical elements is a plastic lens.

The applicant's admitted prior art teaches wherein each of the first and second optical elements is a plastic lens (paragraphs 2 and 3).

The two are analogous art because they both deal with same field of invention of recording onto an optical disc.

At the time of invention it would have been obvious to one of ordinary skill in the art to provide the apparatus of Hendricks et al. with the plastic lens of the applicant's admitted prior art. The rationale is as follows: At the time of invention it would have been obvious to provide the apparatus of Hendricks et al. with the plastic lens of the applicant's admitted prior art because plastic has low weight compared to glass therefore the load on the drives can be reduced.

In regard to claim 10, Hendricks et al. teaches all the elements of claim 10 except plural different kinds of optical information recording mediums.

The applicant's admitted prior art teaches plural different kinds of optical information recording mediums (paragraph 7 lines 9-13).

At the time of invention it would have been obvious to one of ordinary skill in the art to provide the apparatus of Hendricks et al. with the plural types of recording media of the applicant's admitted prior art. The rationale is as follows: At the time of invention it would have been obvious to provide the apparatus of Hendricks et al. with the plural

types of recording mediums of the applicant's admitted prior art because it would have provided more versatility in the types of media available to be processed.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hendricks et al. in view of Saito (US 6781943).

In regard to claim 13, Hendricks et al. teaches all the elements of claim 13 except the ring-shaped structure is formed on an aspherical surface.

Saito teaches the ring-shaped structure is formed on an aspherical surface (fig. 2).

The two are analogous art because they both deal with the same field of invention of recording onto optical media.

At the time of invention it would have been obvious to one of ordinary skill in the art to provide the apparatus of Hendricks et al. with the aspherical lens of Saito. The rationale is as follows: At the time of invention it would have been obvious to provide the apparatus of Hendricks et al. with the aspherical lens of Saito because using an aspherical lens is an effective way to correct for aberration.

***Allowable Subject Matter***

Claims 3 and 11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Response to Arguments***

Applicant's arguments filed 6/16/06 have been fully considered but they are not persuasive. In regard to claim 1, applicant argues on page 9, paragraph 3, that the flange section of Hendricks "is separate from, and thus not solidly formed with either objective lens 12 or modifier 14 as set forth in independent claim 1". However the examiner maintains this rejection because claim 1 states the flange section is formed around either the objective lens or the modifier not with either of these elements.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Haley whose telephone number is 571-272-0574. The examiner can normally be reached on M-F 8:30am-5pm.



If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on 571-272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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